

REMARKS

After entry of this amendment, claims 1-5, 7-13, and 15-22 are pending in the application. Claims 1, 2, 4-5, 8-10, 12, 14, 16, and 20 have been amended. Claims 6 and 14 have been cancelled without prejudice. Claims 21 and 22 are new. Reconsideration of the application as amended is requested.

In the Final Office Action dated August 23, 2002, claims 8-15 and 20 were withdrawn from consideration as being directed to a non-elected invention. Claims 8 and 20 are method claims; however, claims 9-13 and 15 are product-by-process claims linking the method claims 8 and 20-22 to the product claims 1-5 and 16-19 constructively elected through original presentation for prosecution. Accordingly, the linking claims must be examined pursuant to MPEP §809 and §809.03 regardless of the election. After allowance of any linking claim, Applicant is entitled to rejoinder of the non-elected method claims. The Examiner's consideration of linking claims 9-13 and 15 as amended is requested.

Claims 16-19 stand rejected under 35 U.S.C. §112 as lacking antecedent basis for the limitation "the initial space." Claim 16 has been amended to correct this typographical error; accordingly, withdrawal of the rejection of claims 16-19 under 35 U.S.C. §112 is requested.

Claims 5-7 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by Schoen, U.S.P.N. 4,071,794. Claims 1-4 and 16-19 have been rejected under 35 U.S.C. §103 as being unpatentable over Schoen in view of Abbratozzato (U.S.P.N. 4,682,066). The rejected claims have been carefully amended to clarify Applicant's invention.

The present invention is directed to a brush holder including an alignment tab that aligns the brushes based solely on the magnet position within the housing. Specification at page 3, lines 12-14. Only a single tab on the brush holder is received within a single space between opposing ends of the magnets, i.e. a single tab is received within a corresponding space. No other alignment means is necessary and as such, alignment between brushes and magnet takes place separate and independent of the housing. Both Schoen and Abbratozzato teach a plurality of tabs extending into each space between the magnets. Schoen teaches magnets 18 and 20 intertwined

between a plurality of resilient arms 16 formed on a magnet retention member 14 and fingers 32 axially projecting from the end cover 24. Col. 2, lines 21-26. Likewise, Abbratozzato teaches end caps 38 and 40 with circumferential orientation surfaces 78 and axial orientation surfaces 80 engageable respectively with cooperating magnet circumferential and axial end faces 82, 84. Col. 6, lines 56-64. Abbratozzato further teaches radial orientation 62 surfaces formed on the end caps 38, 40 against which the magnet segments 56 and 58 are biased. Neither reference teaches that a space between the magnets receives one and only one brush holder tab. The references taken singularly or in any permissible combination, do not anticipate, teach or render obvious the claimed invention; accordingly, withdrawal of the rejections under 35 U.S.C. §102 and §103 is requested.

Moreover, neither of the references cited by the Examiner teaches that the magnet is attached to the housing independently of the brush holder as claimed in amended claims 4, 5, 8, 12, 16 and 20. Both Schoen and Abbratozzato teach structure that cooperates with the motor housing to orient and retain the magnet. Schoen teaches arms 16 and fingers 32 that "attach" the magnet (broadly speaking) to an inner surface of the case 2. Abbratozzato teaches a tubular spring 60 and cooperating radial orientation surfaces 62 formed on the end caps 38, 40. In contrast, the brush holder 112 of the present invention plays no role in attaching the magnet to the housing. It does not engage with any portion of the motor housing 102 in a frictional or interference fit. Specification at page 5, lines 17-21. Not only has this been recited in claims 5, 8, 16 and 20 as amended, but it is recited in dependent claims 4 and 12. It is respectfully submitted that these claims recite patentable subject matter, not anticipated, taught or rendered obvious by the cited references taken singularly or in any permissible combination.

Finally, none of the references teaches a single tab for each corresponding space where each tab is of uniform width along its length to be received within the space formed between opposing magnet ends as claimed in amended claim 16. The tabs according to the invention do not need to meet close tolerances and do not need to engage with other tabs on flanges to orient the brushes; consequently, they may be of simple, uniform construction as claimed. Therefore,

claim 16 recites patentable subject matter, not anticipated, taught or rendered obvious by the cited references taken singularly or in any permissible combination, i.e. Shoen teaches a finger 32 with a shoulder for engaging arm 16 and Abbratozzato teaches cooperation between a plurality of various shaped tabs..

Claims 21 and 22 have been added through this amendment. Although drawn to a non-elected invention, Applicant believes that these claims (as well as claims 8 and 20) are eligible for rejoinder after allowance of claim 9, or any other linking claim.

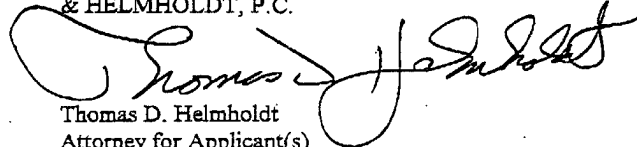
This Amendment does not raise any new issues requiring further consideration and/or search because the invention is still directed to a brush holder having alignment tabs for aligning brushes within a motor housing. The Amendment does not raise the issue of new matter. The Amendment places the application in better form for appeal by materially reducing or simplifying the issues for appeal since the claims have been amended to clearly recite that alignment of the brushes with the magnet occurs exclusively through a single tab received within a space formed between the magnets. The Amendment does not present additional claims without cancelling a corresponding number of finally rejected claims. The after final amendment was necessitated due to the examiner's reliance on the newly cited reference to Abbratozzato. This Amendment could not have been earlier presented, since the Examiner had not relied on the Abbratozzato reference previously, so this is Applicants' attorney's first opportunity to address the Examiner's rejection based on this reference.

It is respectfully submitted that this Amendment traverses and overcomes all of the Examiner's objections and rejections to the application as originally filed. It is further submitted that this Amendment has antecedent basis in the application as originally filed, including the specification, claims and drawings, and that this Amendment does not add any new subject matter to the application. Reconsideration of the application as amended is requested. It is respectfully submitted that this Amendment places the application in suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE, WOOD
& HELMHOLDT, P.C.



Thomas D. Helmholdt
Attorney for Applicant(s)
Registration No. 33181
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**In the claims:**

1. (Twice Amended) A motor housing assembly comprising:
a motor housing;
at least one pair of magnets having opposing ends [disposed]
positioned within the motor housing in a spaced relationship to form at least one
space therebetween; and
a brush holder having a plurality of brushes associated therewith and
[at least one] only a single tab for each space formed between opposing ends of
adjacent magnets, where only the single tab [directly engaging] extends between the
opposing ends of the magnets [within the at least one space] to align the brushes with
respect to the magnets separate and independent of the motor housing, such that
alignment of the brushes occurs exclusively as a result of interaction between the
single tab of the brush holder and the corresponding space.
2. (Amended) The motor housing assembly of claim 1, wherein
the pair of magnets are positioned within the housing to form two spaces
therebetween and the brush holder has [two tabs to fit in the two spaces] only a single
tab extending within each respective space.
4. (Amended) The motor housing assembly of claim [2] 1,
wherein the pair of magnets [are] is attached to an inner surface of the motor housing
separate and independent of the brush holder.
5. (Amended) A motor housing assembly[,] comprising:
a motor housing;
a pair of magnets attached to an inner surface of the motor housing in
a spaced relationship to form [two] first and second spaces [that lie] lying generally
opposite from each other;
an armature [disposed in] positioned between the pair of magnets; and

a brush holder having a plurality of brushes and a first tab extending within the first space and a second tab extending within the second space [two that fit within the two spaces formed by the pair of magnets] to align the plurality of brushes with the magnets separate and independent of the motor housing, such that alignment of the brushes occurs exclusively as a result of interaction between the single tab of the brush holder and the corresponding space, the magnets being attached to the housing separate and independent of the brush holder.

Please cancel claim 6 without prejudice.

8. (Amended) A method for assembling a motor [structure] housing assembly comprising the steps of:

positioning at least one pair of [two] magnets having opposing ends within a motor housing to form at least one space therebetween;

positioning a brush holder having a plurality of brushes associated therewith and [at least one] only a single tab for each space between opposing ends of adjacent magnets [with respect to the magnets]; and

[sliding] extending only each single tab [into] within the respective space [between] formed between adjacent ends of the magnets to align the plurality of brushes with the magnet separate and independent of the housing, such that alignment of the brushes occurs exclusively as a result of interaction between the single tab on the brush holder and the corresponding space. [the tab directly engages the opposing ends of the magnets].

9. (Amended) A motor housing assembly [structure] produced according to the method of claim 8 comprising:

a motor housing;

at least one pair of magnets having opposing ends positioned within [a] the motor housing in a spaced relationship to form at least one space therebetween; and

a brush holder having a plurality of brushes associated therewith and [at least one] only a single tab for each space formed between opposing ends of adjacent magnets, where only the single tab [directly engaging] extends between the opposing ends of magnets [within the at least one space] to align the brushes with respect to the magnets separate and independent of the motor housing, such that alignment of the brushes occurs exclusively as result of interaction between the single tab of the brush holder and the corresponding space.

10. (Amended) The motor having assembly [structure] of claim 9, wherein the pair of magnets is positioned within the housing to have [having] two opposing ends therebetween [forming two spaces] and the brush holder has [two tabs to fit in the two spaces] only a single tab extending within each respective space.

12. (Amended) The motor housing assembly [structure] of claim 9, wherein the pair of magnets is attached to an inner surface of the motor housing separate and independent of the brush holder.

13. (Amended) The motor housing assembly [structure] produced according to the method of claim 8 comprising:

a motor housing;

a pair of magnets attached to an inner surface of the motor housing in a spaced relationship to form [two] first and second spaces lying generally opposite from each other;

an armature [disposed in] positioned between the pair of magnets; and

a brush holder having a plurality of brushes, [and] a first tab extending within the first space and a second tab extending within the second space [two tabs positionable within the two spaces formed by the pair of magnets] to align the plurality of brushes with the magnets separate and independent of the motor housing, such that alignment of the brushes occurs exclusively as a result of interaction between the first and second tabs of the brush holder and the corresponding first and

second spaces, the magnets being attached to the housing separate and independent of the brush holder.

Please cancel claim 14 without prejudice.

16. (Amended) A motor assembly housing comprising:
a motor housing;
at least one pair of magnets having opposing ends [disposed]
positioned within the motor housing to define a space therebetween; and
a brush holder having [at least one] a plurality of brushes associated therewith and only a single tab with substantially uniform width [directly engaging] extending between the opposing ends of the pair of magnets and [magnet] within the [initial] space defined therebetween to align the brushes with respect to the magnets separate and independent of the motor housing, such that alignment of the brushes occurs exclusively as a result of interaction between the single tab of the brush holder and the corresponding space.

20. (Amended) A method for locating a motor brush to a magnet comprising the steps of:
attaching at least one pair of magnets having opposing ends within a motor housing to define a space therebetween;
positioning a brush holder having a plurality of brushes with respect to the attached magnets, the brush holder having [at least one] a single tab in an initial position relative to the space defined between the pair of magnets; and
[directly engaging] extending only the [at least one] single tab [with] between the opposing ends of the pair of magnets [within] defining the space to [reposition] align the brush holder [to] in a final position [in] of alignment with the magnets separate and independent of the motor housing, such that alignment of the brushes occurs exclusively as a result of interaction between the single tab of the brush holder and the corresponding space.

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Claims 21 and 22 are new.